



# Montana

## Statewide Communication Interoperability Plan (SCIP) October 2013



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## EXECUTIVE SUMMARY

The Montana Statewide Communications Interoperability Plan (SCIP) is a stakeholder-driven, multi-jurisdictional, and multi-disciplinary statewide strategic plan to enhance interoperable public safety communications. The SCIP is a critical mid-range (two years: October 1, 2013 – September 30, 2015) strategic planning tool to help public safety communications stakeholders in Montana prioritize resources, strengthen governance, identify future investments, and address interoperability gaps.

### **The purpose of the SCIP is to:**

- *Provide the vision and strategic direction for public safety interoperable communications.*
- *Enable statewide trunked land mobile radio system(s) stakeholders to develop a long-term viable plan for the operation and maintenance of a statewide trunked land mobile radio system(s).*
- *Prepare for consultation with the First Responder Network Authority as the Nationwide Public Safety Broadband Network is deployed in Montana.*

### **The following are Montana's Vision and Mission for improving public safety communications interoperability statewide.**

**Vision:** *Effective interoperable public safety communications across disciplines and jurisdictions*

**Mission:** *Through engagement and collaboration with stakeholders ensure the delivery of interoperable public safety communications systems*

### **The following strategic goals represent the priorities for delivering Montana's vision for interoperable public safety communications.**

#### **Governance:**

- *Full advisory board membership with required working groups*
- *Consult with the First Responder Network Authority for the deployment of the Nationwide Public Safety Broadband Network*
- *Full participation in the First Responder Network Authority consultation process*

- *Cost-effective deployment, maintenance, and operations of public safety communications system(s)*

**Standard Operating Procedures (SOP):**

- *Updated statewide land mobile radio mutual aid frequencies and terms and conditions for usage*
- *Establish terms and conditions to operate on the statewide trunked LMR system(s)*

**Technology:**

- *Complete the land mobile radio microwave backbone*
- *Effective and efficient operations and maintenance of the statewide trunked land mobile radio system(s)*
- *Deploy the Nationwide Public Safety Broadband Network in Montana*

**Training and Exercise:**

- *Regional exercises with a communications component*
- *Communications-related training integrated in LE/Fire/EMS agencies and continuing education curriculum*

**Usage:**

- *Measured customer satisfaction to encourage participation in the statewide trunked LMR system(s)*
- *Monitored statewide trunked LMR system(s) usage for optimum performance*

**Outreach and Information Sharing:**

- *Outreach and education for greater awareness of communications related issues across the state*
- *Public safety broadband outreach using existing forums for state, local, and tribal stakeholders*

**Life Cycle Funding:**

- *Dedicated funding mechanism to maintain the statewide trunked LMR system(s)*
- *Operations and maintenance plan(s) that account for life cycle costs for the statewide trunked LMR system(s)*

**This document contains the following planning components:**

**Introduction:** Provides the context necessary to understand what the SCIP is and how it was developed.

**Purpose:** explains the purpose/function(s) of the SCIP.

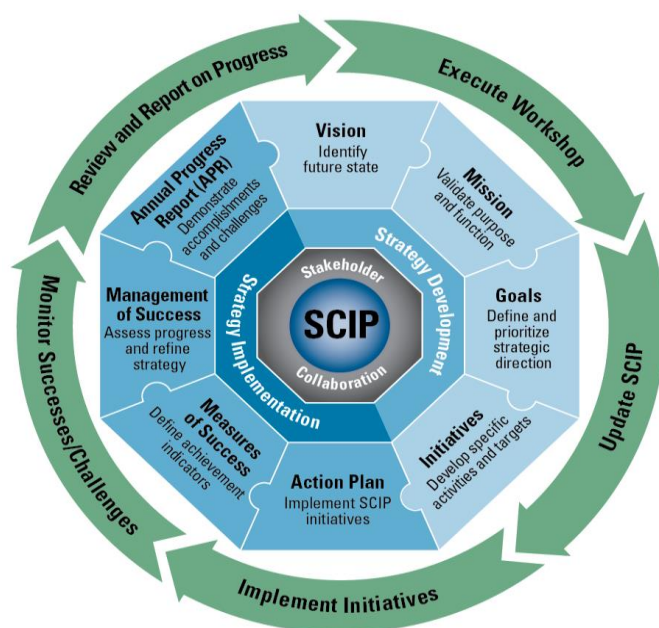
**Montana Interoperable Public Safety Communications Overview:** provides an overview of the current and future public safety communications environment in Montana.

**Vision and Mission:** articulates the two year vision and mission for interoperable public safety communications.

**Strategic Goals and Initiatives:** outlines the strategic goals and initiatives aligned with the vision and mission of the SCIP and pertains to the following critical components: Governance, Standard Operating Procedures (SOP), Technology, Training and Exercises, Usage, Outreach and Information Sharing, and Life Cycle Funding.

**Implementation:** describes the process to evaluate the success of the SCIP and to conduct SCIP reviews to ensure the Plan is up-to-date and aligned with the changing internal and external environment.

**Reference Materials:** includes resources that provide additional background information on the SCIP or interoperable public safety communications.



**Figure 1: SCIP Strategic Plan and Implementation Components**

*Figure 1 provides additional information about how these components of the SCIP interrelate to develop a comprehensive plan for improving interoperable public safety communications.*

## INTRODUCTION

The Montana SCIP is based on an understanding of the past, current and mid-range interoperable public safety communications environment. It is also important to note that the SCIP is part of a continuous cycle as stakeholders will always need to adapt to evolving technologies, operational tactics, and changes to key individuals (e.g., elected officials, advisory board members, etc.). In the next two years, Montana will primarily encounter challenges relating to governance, maintaining legacy communications systems, deployment of new communications technologies and networks and dedicated funding.

Wireless voice and data technologies are evolving rapidly and efforts are underway to deploy a nationwide broadband network to meet the needs of public safety. For example, the enactment of the Middle Class Tax Relief and Job Creation Act of 2012 (the Act), specifically Title VI, related to Public Safety Communications, authorizes the deployment of a Nationwide Public Safety Broadband Network (NPSBN). The NPSBN will be an interoperable nationwide communications network that will allow members of the public safety community to securely and reliably communicate and share information. The NPSBN may also forge a path for additional public safety broadband initiatives, such as Next Generation 911 (NG911).

Deploying current broadband technologies provides an unparalleled opportunity for the future of all communications included in the public safety communications continuum, which includes communications from the citizen in need of emergency aide to dispatch to emergency responders.

While broadband technologies and networks are deployed and initially used by public safety stakeholders, maintaining legacy communications systems will be required during this transition. Securing dedicated funding to support the ongoing maintenance of legacy communications systems will continue to be a challenge in the mid-term. As public safety communications federal grant funding continues to diminish, state and local stakeholders will need to identify and secure alternative funding sources.

## 2. PURPOSE

**The SCIP is developed through engagement and input from a broad spectrum of public safety communications stakeholders and is adopted by the SIGB. The purpose of the SCIP is to:**

- Provide the vision and strategic direction for public safety interoperable communications.
- Enable public safety communications stakeholders to develop a long-term viable plan for the operation and maintenance of a statewide trunked land mobile radio system(s).
- Prepare for consultation with the First Responder Network Authority as the Nationwide Public Safety Broadband Network is deployed in Montana.

The development, adoption and execution of the SCIP assists the Department of Homeland Security (DHS), Office of Emergency Communications (OEC) with addressing the results of the National Emergency Communications Plan (NECP) Goals and fulfilling the Presidential Policy Directive 8 (PPD-8) National Preparedness Goal for Operational Communications.

In addition to this SCIP, DHS OEC requires the completion and submittal of an Annual Progress Report (APR) that will be shared with other federal and regional stakeholders to highlight recent accomplishments and demonstrate progress toward achieving the goals and initiatives identified in the SCIP.

## 3. MONTANA INTEROPERABLE PUBLIC SAFETY COMMUNICATIONS OVERVIEW

In the next two years, Montana will primarily encounter challenges relating to governance, maintaining legacy communications systems, deployment of new communications technologies and networks and dedicated funding. The Montana SCIP is based on an understanding of the past and current interoperable public safety communications environment. We need to review and consider the history of public safety communications in Montana, as we cannot know where we are going unless we know where we have been.

### Governance

In 1996, former Governor Marc Racicot, by Executive Order (EO), created the Montana Public Safety Communications Committee (MPSCC). This Committee set about assessing Montana's



public safety communication needs. Several studies concluded that development of land mobile radio (LMR) should proceed as a natural outgrowth of existing relationships and processes. The dictum “all events are local; all disasters are local” came into play. Throughout Montana’s public safety communications history local jurisdictions are at the helm with a supporting role by the state.

In 2001 international terrorists attacked the World Trade Center Towers and the Pentagon causing 2,973 fatalities. As a result the 9-11 Commission, an independent, bipartisan commission was created by Congress and President George W. Bush in late 2002. The Commission’s charter included preparing a full and complete account of the circumstances surrounding the September 11, 2001 terrorist attacks, including preparedness for and the immediate response to the attacks. The Commission was also mandated to provide recommendations designed to guard against future attacks.

The Commission’s final report detailed problems in command and control, radio communications and evacuations procedures that probably added to the casualties. The 9-11 Commission report stated: “Almost all aspects of communications continue to be problematic; from initial notification to tactical operations...The problems in command, control, and communications that occurred at both sites will likely recur in any emergency of similar scale. The task looking forward is to enable first responders to respond in a coordinated manner with the greatest possible awareness of the situation.” To address these issues Congress enacted the Homeland Security Act of 2002. The Act consolidated 22 federal agencies into the Department of Homeland Security.

In 2003 DHS issued requirements that each state have a Homeland Security Strategic Plan; through guidance from DHS interoperable communications was rated as the #2 goal in the Montana Plan.

In addition to strategic planning, significant federal grant funding became available to implement plan initiatives, but in approving appropriations to DHS Congress included a requirement that 80% of the DHS grant funding awarded to each state be passed through to local governments. In Montana this requirement drove the formation of regional consortia. Local governments and their public safety entities begin to form multi-county consortia to discuss local interoperable communication needs. 56 counties and 7 tribal nations formed 8 regional consortia to plan and deploy regional interoperable LMR communications systems.

At the state level, in order to receive and pass funding through to local governments, the Governor designated the Montana Department of Military Affairs (MDMA), Disaster and Emergency Services Division (DES), as the State Administering Agency (SAA) for the State Homeland Security Grant Program (SHSGP). Additionally, DHS required that the Governor appoint a Senior Advisory Council (SAC) to provide advisement on the allocation of SHSGP dollars. The program initiatives were to be in accordance with State Homeland Security Plan priorities.



By 2004, the MPSCC became the State Interoperability Executive Committee (SIEC). The SIEC is a communications governance and coordination model that originated from the Federal Communications Commission (FCC) Forth Report and Order of Docket 96-86.

The Office of Emergency Communications Governance Model: The Post Katrina Act of 2006 created the Office of Emergency Communications (OEC) within DHS. OEC's function is to coordinate emergency communications activities at the federal, state and local levels and with the private sector. At the direction of Congress, OEC developed the National Emergency Communications Plan (NECP) to address emergency communications challenges and gaps across all levels of government. Moreover, each state is required to have a Statewide Communications Interoperability Plan (SCIP). SCIP's are an input into the NECP and OEC's progress reports to Congress.

In 2008, OEC issued "Establishing Governance to Achieve Statewide Communications". This Guide recommends that states have Statewide Interoperability Governing Bodies and Statewide Interoperable Communications Coordinators.

OEC emphasizes that the governance model can be adapted to individual state practices and preferences. Of note is a semantic distinction: although the OEC title is "Statewide Interoperability Governing Body", in Montana per state statute, this group is "advisory" to the Governor; The SIGB is not an independent board authorized by the Montana Legislature.

By 2008, local governments formed the Interoperability Montana Project Directors or IMPD. By 2010, the IMPD was incorporated by county Inter Local Agreement as a 501-C(4) corporation known as Interoperability Montana (IM). At this time in essence there was one local government entity that responsible for managing grant funding and projects and the maintenance of the statewide trunked LMR system(s) and the IM Executive Director was also designated as the Statewide Interoperability Coordinator (SWIC).

By 2011, Interoperability Montana was running out of administrative and operations funding and on June 30, 2011 IM dissolved. When IM dissolved approximately \$10 million in grant awards, projects and contracts were abandoned.

As a result, former Governor Brian Schweitzer issued Executive Order 13-2011 on September 30, 2011 establishing the Statewide Interoperability Governing Board (SIGB) to: "Continue to manage the orderly transition of assets, resources and grant dollars to local jurisdictions as required by DHS..." As stated above, the SIGB is a DHS OEC recommended governance model. The Executive Order also established a SWIC within state government. The SWIC and SIGB prioritized and provided oversight for the completion of the remaining projects and the close-out of the stranded contracts.

The Middle Class Tax Relief and Job Creation Act of 2012 (Act) created the First Responder Network Authority (FirstNet) as an independent federal authority within the U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) to provide emergency responders with the first nationwide, high-speed, broadband network dedicated to

public safety. The Act also provided for the State and Local Implementation Grant Program (SLIGP).

The SLIGP is a formula-based, matching grant program administered by NTIA. The program is designed to assist state, local, and tribal government entities as they plan for the NPSBN. Grants support planning, consultation, education and outreach activities, as well as fund efforts to collect data on existing infrastructure and equipment that could be used by FirstNet in building a wireless public safety broadband network. NTIA included in the SLIGP grant requirements that each state have a governance structure (i.e. state advisory council).

On October 1, 2013, Governor Steve Bullock issued Executive Order 10-2013 continuing the SIGB for two years and updating the membership and purpose of the board to fulfill NTIA SLIGP requirements. The Governor's Executive Order informs the Montana SCIP Plan for the next two (2) years and authorizes and directs the roles and responsibilities of the SIGB and SWIC.

### **Legacy Communication Systems**

2003 - 2012 was a time period of rapid deployment of interoperable LMR systems across the United States that was encouraged by federal LMR interoperability initiatives and fueled by significant federal grant funding, and the LMR technology of the day was digital.

When LMR systems began transitioning to digital technology, public safety and industry officials began to define standards for interoperability. The standards were called Project 25 or P25. Radios that met the P25 criteria in theory would be "interoperable", regardless of the vendor. The standards define eight different interfaces between various parts of a radio system. Most public safety officials wanted a solution they knew – the LMR systems they already owned and operated – and wanted to upgrade to interoperable equipment and systems. In this market, that meant P25 equipment, and Motorola was the leading vendor providing P25 interoperable LMR systems and equipment.

In 2003, Lewis and Clark County sponsored Concept Demonstration Project #1. This Project deployed a digital Motorola P25 trunked LMR system in Lewis and Clark County. CDP#1 was followed by CDP #2, the Northern Tier Project, which funded additional digital Motorola P25 LMR systems along the northern Montana border (known as the Northern Tier Interoperable Consortia or NTIC).

In addition, several other consortia and individual counties began purchasing digital interoperable LMR communications equipment and systems to be tied into the Motorola P25 trunked LMR system and the master control zone controller located at the Lewis and Clark Law Enforcement Center (CDP #1). The Project attracted partners including the Federal Bureau of Investigation (FBI), and the U.S. Air Force (USAF); and, state agency partners including the National Guard (MTNG) and the Montana Highway Patrol (MHP). Each partner had its own strategic and tactical interests but shared the need for a microwave transport system or infrastructure upon which to place radio antennas and repeaters; or, to place electronic equipment including radio trunking at various communication sites. Slowly at first, an interoperable statewide LMR system developed.

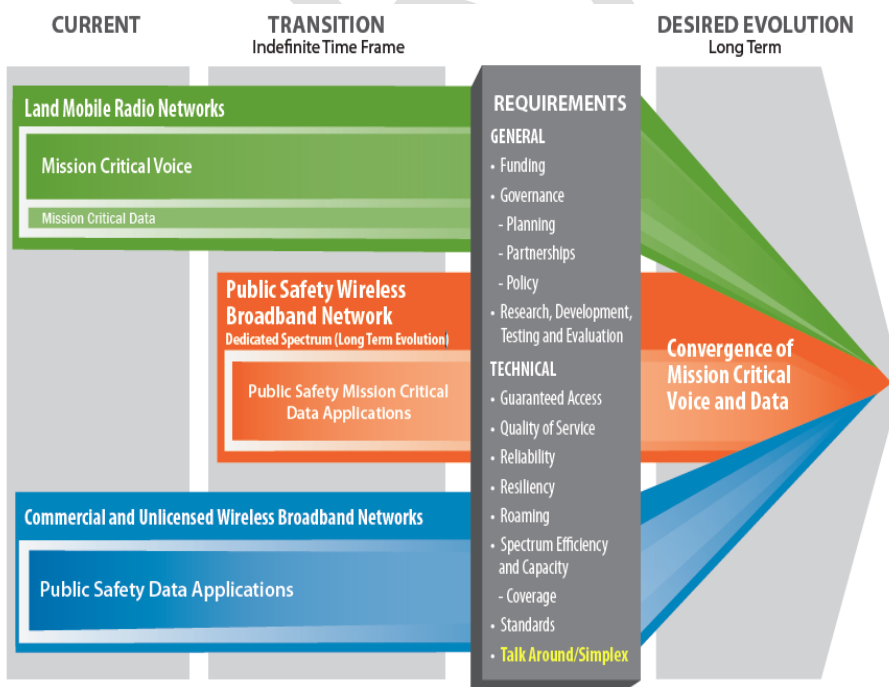
Through recent DHS OEC technical assistance and engagement with stakeholders the build-out for the statewide trunked LMR system was rebase-lined and prioritized. Current total cost estimates for completion of the statewide trunked LMR system(s) is approximately \$120 million. Through 2013 approximately \$70 million in state and federal funding was spent on building out the statewide trunked LMR system(s). Currently a remaining \$50 million is required to complete the full statewide build-out. In addition there are only four (4) microwave hops remaining to complete the statewide LMR backbone that was initially proposed back in 2003.

The current statewide trunked LMR system of systems poses an operations and maintenance dilemma. As stated previously Congress directed that 80% of the funding had to be passed through to local governments. Although Montana had a single vision of an interoperable statewide trunked LMR system, because of congressionally mandated local government funding and ownership requirements, all infrastructure components of the system(s) are fractionated at the state and local level.

### Deployment of Current Communications Technologies

The communications technology of today is broadband (high speed IP network). As stated previously the Middle Class Tax Relief and Job Creation Act of 2012 included provides for a nationwide broadband network. 4th Generation Long Term Evolution (4G LTE) is the current commercial industry network standard and is the technology platform for the newly envisioned NPSBN. Initially, the NPSBN will be a mobile broadband and administrative voice network. However, FirstNet will add mission critical voice as 4G LTE mission critical technologies and devices are developed.

The following depicts the public safety communications evolution from LMR to the NPSBN.



*More information is available in OEC's Public Safety Communications Evolution brochure.*

### **Public Safety Communications Funding**

Since 2003-2004 federal grants funding administered by DHS were the primary funding source for state and local governments for interoperable LMR equipment and systems. In recent years Congress has greatly reduced DHS appropriations and/or has not funded dedicated interoperable communications grant programs. For example, no funding has been appropriated to DHS for the Interoperable Emergency Communications Grant Program (IECGP) and there has been an approximate 86% decrease in the State Homeland Security Grant Program funding awarded to Montana since 2003-04. Moreover, with limited funding available grant priorities have also migrated away from interoperable communications.

The Montana Legislature, over three bi-annual sessions, appropriated funding to support the interoperable statewide trunked LMR system(s) by authorizing state matching and direct funds for radios, site infrastructure and a second zone control unit located at Sidney, Montana. 2007 state appropriations totaled \$8.095 million.

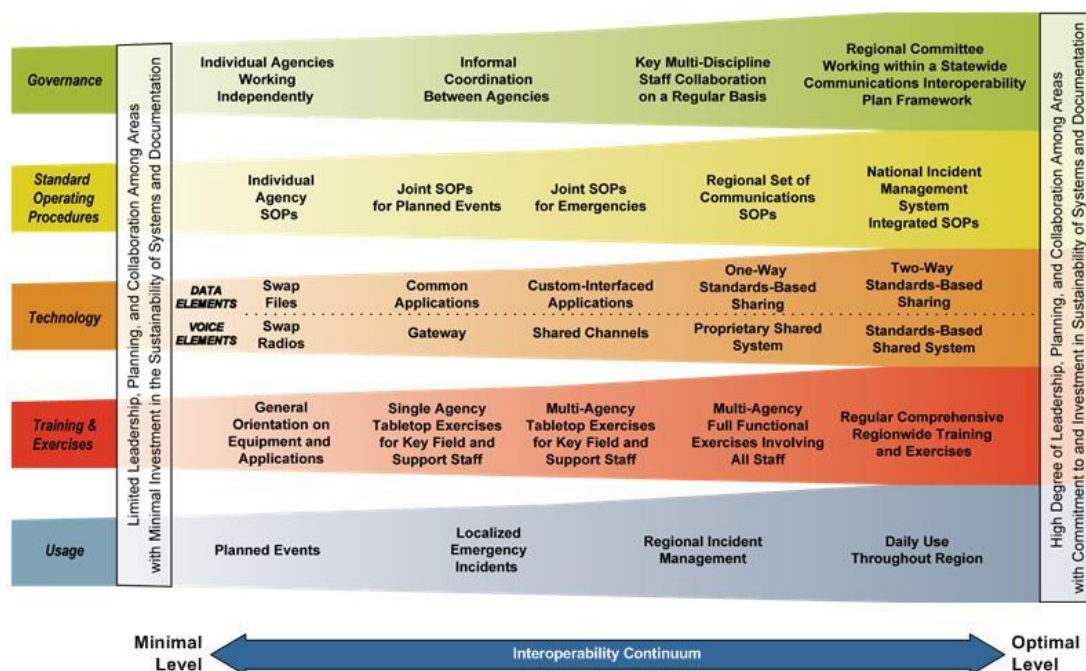
State funding was also used to fulfill federal grant match requirements. For example state appropriations were used to match a \$6 million dollar grant from the U.S. Department of Justice (USDOJ). Community Oriented Policing Services (COPS) program to purchase trunking equipment and subscriber radios to enable system expansion and usage.

State appropriations were also used to match a \$6.5 million grant; the Public Safety Interoperable Communications Grant Program (PSIC). Although the PSIC grant was administered by NTIA not DHS, NTIA adopted the same rules as DHS/SHSP funding, including the 80% pass-through provisions to local governments. PSIC funding expanded the statewide LMR microwave backbone to southwest Montana and Yellowstone County.

Unless new federal initiatives call for and provide dedicated funding for the continued build-out of the statewide interoperable LMR system(s), in Montana, the focus has shifted from build-out to operation and maintenance of existing systems by state and local governments.

Currently there is also no dedicated federal funding source for the operation and maintenance of the statewide trunked LMR system(s). The 2013 Legislature appropriated \$3 million for system maintenance and Governor Bullock's 2013 Executive Order directs the SIGB to engage system(s) stakeholders in the development of a long-term viable plan for the operation and maintenance of the statewide trunked LMR system(s).

The interoperability continuum developed by SAFECOM (figure 10 below) serves as a framework to address all of these challenges and to continue improving interoperable public safety communications. It is designed to assist policy makers with planning and implementing interoperability solutions for voice and data communications.



**Figure 10: The Interoperability Continuum**

The continuum identifies five critical success elements to achieve a successful interoperable communications solution:

**Governance** – collaborative decision-making process that supports interoperability efforts to improve communication, coordination, and cooperation across disciplines and jurisdictions. Governance is the critical foundation of all of the efforts to address communications interoperability.

**SOP's** – policies, repetitive practices, and procedures that guide emergency responder interactions and the use of interoperable communications solutions.

**Technology** – systems and equipment that enable emergency responders to share voice and data information efficiently, reliably, and securely.

**Training and Exercises** – scenario-based practices used to enhance communications interoperability and familiarize the public safety community with equipment and procedures.

**Usage** – familiarity with interoperable communications technologies, systems, and operating procedures used by first responders to enhance interoperability.

More information on the Interoperability Continuum is available in OEC's Interoperability Continuum brochure. The following sections will further describe how the SCIP will be used and will outline the path forward for enhancing interoperable public safety communications.

## VISION AND MISSION

The Vision and Mission section describes the Montana vision and mission for improving public safety communications interoperability.

Montana Interoperable Public Safety Communications Vision:

*Effective interoperable public safety communications across disciplines and jurisdictions*

Montana Interoperable Public Safety Communications Mission:

*Through engagement and collaboration with stakeholders ensure the delivery of interoperable public safety communications systems*

## STRATEGIC GOALS AND INITIATIVES

This section describes the goals and initiatives for delivering the vision for interoperable public safety communications. The goals and initiatives are grouped into seven sections that follow the “Interoperability Continuum” which includes governance, SOP’s, technology, training and exercises, usage, outreach and information sharing, and life cycle funding.

### Governance

The Governance Section of the SCIP outlines the future direction of the Montana governance structure for interoperable public safety communications. The SIGB was formalized through Executive Order 10-2013 that was signed by the Governor on October 1, 2013.

As stated in the Executive Order, the purpose of the SIGB is to plan, develop and promote public safety interoperable communications in Montana. Interoperable communications include land mobile radio and broadband technologies.

**Table 1: Governance Goals and Initiatives**

Governance Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
1.	<b>Full advisory board membership with required working groups</b>	Appoint SIGB members	Governor	January 2014
		Adopt and maintain Charter and By-Laws	SIGB	March 2014 As Required
		Create and maintain working groups as needed within the SIGB regarding public safety communications initiatives	SIGB SWIC	As Required
2.	<b>Consult with the First Responder Network Authority for the deployment of the Nationwide Public Safety Broadband Network</b>	Engage in FirstNet consultation process	SIGB SPOC	Ongoing
3.	<b>Full participation in the First Responder Network Authority consultation process</b>	Communicate with public safety associations and Montana telecommunications providers through engagement and dissemination of information	SIGB SPOC MDOA/SLIGP	Ongoing
4.	<b>Cost-effective deployment, maintenance, and operations of public safety communications system(s)</b>	Encourage the performance of a cost/benefit analysis of communications systems and projects before endorsement by the SIGB	SIGB Working Group(s) SWIC	Ongoing

## STANDARD OPERATING PROCEDURES (SOP's)



The SOP section of the SCIP identifies the framework and processes for developing and managing SOP's statewide. SOP's for LMR mutual aid frequencies are coordinated by the Department of Administration, Mutual Aid Frequency Program. The SIGB through the member associations/agencies and working group(s) also coordinates SOP-related efforts focused on supporting interoperable public safety communications initiatives.

To ensure consistent use of the statewide trunked LMR system(s), the system owners, operators and users are encouraged to identify key needs associated with SOP's.

**Table 2: Standard Operating Procedures Goals and Initiatives**

Standard Operating Procedures Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
5.	<b><i>Updated statewide LMR mutual aid frequencies and terms and conditions for usage</i></b>	Update statewide mutual aid frequencies manual and use permit system	MDOA/MAFP SWIC	March 2015
6.	<b><i>Establish terms and conditions to operate on the statewide trunked LMR system(s)</i></b>	Establish a Working Group	SIGB	October 2014
		Develop consensus on the need for standardized protocols	Working Group	December 2014
		Develop and share model SOP's	Working Group	June 2015
		Implement SOP's	System(s) owners, operators and users	August 2015
		Establish formal review process of SOP's	Working Group	December 2015 Annually

## TECHNOLOGY

The Technology section of the SCIP outlines initiatives to maintain legacy LMR system(s) and implement current broadband technologies and networks.

**Table 3: Technology Goals and Initiatives**

### Technology Goals and Initiatives

Goal #	Goals	Initiatives	Owner	Completion Date
7.	<b><i>Complete the land mobile radio microwave backbone</i></b>	Review and prioritize existing resources and secure required resources  Execute vendor contract(s); perform project management and complete installation of required equipment	SIGB SWIC  MDOJ/MHP	May 2015
8.	<b><i>Effective and efficient operations and maintenance of the statewide trunked land mobile radio system(s)</i></b>	Establish working group Adopt governance structure Draft and adopt plan Execute plan	SIGB Working Group SWIC System(s) Owners/Operators	December 2014  Ongoing
9.	<b><i>Deploy the Nationwide Public Safety Broadband Network in Montana</i></b>	Consult with the First Responder Network Authority (FirstNet)	FirstNet Network Stakeholders SIGB SPOC	TBD

## Training and Exercises

The Training and Exercises section of the SCIP ensures that emergency responders are familiar with interoperable communications equipment and procedures and are better prepared for responding to real-world events.

The SIGB through an established working group will identify and coordinate training and exercise needs, which will be multi-disciplinary and cross-jurisdictional.

**Table 4: Training and Exercises Goals and Initiatives**

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
		Establish a Working Group	SIGB	July 2015

Training and Exercises Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
10.	<b>Regional exercises with a communications component</b>	Identify training requirements	MDMA/DES Working Group	June 2014 Annually
		Request and schedule OEC Technical Assistance	SWIC	September 2014 Annually
		Conduct outreach to identify and notify appropriate training participants	MDMA/DES	January 2015 Annually
		Identify planned exercises that can incorporate a communications component	MDMA/DES Working Group	October 2015
11.	<b>Communications-related training integrated in LE/Fire/EMS agencies and continuing education curriculum</b>	Establish a Working Group	SIGB	July 2015
		Identify training requirements	Working Group	January 2016, Annually
		Identify availability of training	Working Group	January 2016, Annually
		Recommend new education curriculum	Working Group	September 2016

## Usage

The Usage section of the SCIP outlines efforts to ensure emergency responders adopt and familiarize themselves with interoperable public safety communications technologies, systems, and operating procedures. This approach allows users to interoperate on a daily basis as needed to enhance their ability to deliver services. Such use of communications equipment and systems on a daily basis ensures that interoperable practices become second nature during a significant natural or human-caused catastrophic event.

LMR stakeholders plan to continue to focus on usage-related efforts through continued support of the statewide trunked LMR system to ensure customer satisfaction of the system. The system owners/operators are encouraged to monitor the use of the system through statistical user analysis to ensure optimum performance while encouraging ongoing radio discipline across the user community.

**Table 5: Usage Goals and Initiatives**

Usage Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
12.	<b><i>Measured customer satisfaction to encourage participation in the statewide trunked LMR system(s)</i></b>	Establish a Working Group	SIGB	May 2014
		Conduct user surveys to determine system benefits	Working Group System Owners	July 2014 Annually
		Disseminate survey results to demonstrate the abilities, effectiveness, and benefits of the statewide system	Working Group System Owners	December 2014 Annually
13.	<b><i>Monitored statewide trunked LMR system(s) usage for optimum performance</i></b>	Review and analyze statistics on system usage	Working Group System Owners	June 2015 Annually
		Encourage and promote radio discipline and etiquette by all system users	System Owners Working Group	Ongoing

## Outreach and Information Sharing

The Outreach and Information Sharing section of the SCIP outlines the approach for building a coalition of individuals and emergency response organizations statewide to support the SCIP vision and for promoting common public safety interoperable communications initiatives.

**Table 6: Outreach and Information Sharing Goals and Initiatives**

Outreach and Information Sharing				
Goal #	Goals	Initiatives	Owner	Completion Date
14.	<b><i>Outreach and education for greater awareness of communications related issues across the state</i></b>	Establish a Working Group	SIGB	July 2014
		Evaluate and update existing outreach activities and resources	Outreach Working Group, SWIC	August 2014 Annually
		Identify a funding source to implement a comprehensive public safety communications informational campaign	Outreach Working Group	December 2015 Ongoing
		Conduct a statewide campaign to educate and inform the public and elected officials about the need to maintain and sustain public safety communications systems	SIGB SWIC	July 2016 Ongoing
15.	<b><i>Public safety broadband outreach using existing forums for state, local, and tribal stakeholders</i></b>	Develop SLIGP website and link to the FirstNet website	MDOA/SLIGP	August 2014 Ongoing
		Distribute FirstNet branded and produced information	SIGB SWIC MDOA/SLIGP	September 2016
		Comply with SLIGP requirements for outreach and education	MDOA/SLIGP	Ongoing

## Life Cycle Funding

The Life Cycle Funding section of the SCIP outlines goals and initiatives to support existing legacy and future communications systems. The federal funding landscape has changed significantly in the last couple of years. For example Congress has not appropriated any funding for the DHS Interoperable Emergency Communications Grant Program (IECGP) in recent years. As a result the priorities of interoperable LMR communications have changed and the types of projects and quantity of projects have declined. While Montana looks to the future

with public safety broadband technologies and networks, the statewide trunked LMR system stakeholders are working towards sustainability of the system.

**Table 7: Life Cycle Funding Goals and Initiatives**

Life Cycle Funding Goals and Initiatives				
Goal #	Goals	Initiatives	Owner	Completion Date
16.	<b><i>Dedicated funding mechanism to maintain the statewide trunked LMR system(s)</i></b>	Establish Working Group	SIGB	July 2014
		Research and review possible funding streams to support public safety communications	Working Group	October 2014
17.	<b><i>Operations and maintenance plan(s) that account for life cycle costs for the statewide trunked LMR system(s)</i></b>	Educate stakeholders on life cycle funding	SIGB SWIC OEC	January 2014 Ongoing
		Identify best practices for life cycle planning	SIGB SWIC Working Group	September 2014 Ongoing
		Promote the use of life cycle planning best practices	SIGB SWIC Working Group	December 2014 Ongoing

## IMPLEMENTATION

This section of the SCIP describes the process that will be used to execute the initiatives in the SCIP. The SWIC will present the draft SCIP to the SIGB for their review, comment and adoption. This process will gather input and garner buy-in from the public safety communication stakeholders, while also prioritizing the strategic goals and initiatives and assigning appropriate working groups to oversee SCIP initiatives implementation. The SIGB will formally adopt the SCIP and then use this document as a recognized planning tool to guide the SIGB and its established working groups activities, tasking's and priorities. Regular SIGB meetings will be utilized to work closely with the stakeholders' assigned specific goals and initiatives through a recurring standing agenda item(s) focused on the SCIP initiatives. To ensure success, regular reporting to the SIGB by the working groups will occur throughout the year

## Measures and Management of Success

The Measures and Management of Success section describes the iterative, repeatable method that will be followed to add, update and refine the goals, initiatives and measures of success. The SIGB will assign its existing and future working groups to develop and update the SCIP and its associated strategic goals and initiatives. The SWIC will work with these working groups to monitor the progress made towards achieving the goals identified herein. The chairperson of each working group is responsible for a regular review of the assigned goal, initiative(s) and tasks to track their progress, and will report back to the SIGB at each meeting on their status. Based on the reviews the SIGB will not only be able to evaluate the effectiveness of the SCIP, but will also be able to refine the processes and reshape the interoperable public safety communication strategy as needed.

### Strategic Plan Review

The Strategic Plan Review section outlines the process that will use to conduct reviews of the SCIP to ensure it is up to date and aligned with the changing internal and external interoperable public safety communications environment as well as to track and report progress against the defined initiatives. An annual review and update of the SCIP is essential to achieving Montana's vision for interoperable public safety communications and to support alignment with the National Emergency Communications Plan (NECP). The SWIC will develop and present a draft Annual Progress Report to the SIGB for adoption in September of each year beginning in 2014. This report will be sent to DHS OEC as part of an annual requirement and will be primarily used as a tool to track the progress of specific goals and initiatives.

### REFERENCE MATERIALS

The Reference Materials section outlines resources that contribute additional background information on the SCIP and interoperable and emergency communications in Montana. Table 9 includes the links to these reference materials.

Table 9: SCIP Reference Materials

Title	Description	Source/Location
<b><i>Executive Order 10-2013</i></b>	Signed Executive Order that formalizes the SIGB and outlines SIGB membership in Montana.	<a href="http://governor.mt.gov/docs/EO-10-2013_Continuing_Statewide_Interoperability_Governor_Baord.pdf">http://governor.mt.gov/docs/EO-10-2013_Continuing_Statewide_Interoperability_Governor_Baord.pdf</a>



Title	Description	Source/Location
<b><i>OEC Public Safety Communications Evolution Brochure</i></b>	Describes the evolution of public safety communications and how traditional LMR communications will converge with wireless broadband	<a href="http://PUBLICSAFETYTOOLS.INFO/OEC_GUIDANCE/DOCS/PUBLIC_SAFETY_COMMUNICATIONS_EVOLUTION_BROCHURE.PDF">HTTP://PUBLICSAFETYTOOLS.INFO/OEC_GUIDANCE/DOCS/PUBLIC_SAFETY_COMMUNICATIONS_EVOLUTION_BROCHURE.PDF</a>
<b><i>OEC's Interoperability Continuum</i></b>	The Continuum breaks down interoperable communications according to five key components: governance, SOPs, technology, training and exercises, and usage. Policy makers are encouraged by DHS OEC to use the Continuum to plan and implement interoperability solutions.	<a href="http://www.dhs.gov/emergency-communications-guidance-documents-and-publications">http://www.dhs.gov/emergency-communications-guidance-documents-and-publications</a>
<b><i>2012 SCIP Implementation Report</i></b>	2012 Annual Progress Report that was submitted to DHS OEC that describes SCIP-related efforts in the State.	<a href="http://itsd.mt.gov/content/policy/councils/siqb/docs/SCIP.pdf">http://itsd.mt.gov/content/policy/councils/siqb/docs/SCIP.pdf</a>

**APPENDIX A: LIST OF ACRONYMS**

APR	ANNUAL PROGRESS REPORT
DHS	U.S. DEPARTMENT OF HOMELAND SECURITY
FCC	FEDERAL COMMUNICATIONS COMMISSION
FIRSTNET	FIRST RESPONDER NETWORK AUTHORITY
IECGP	INTEROPERABLE EMERGENCY COMMUNICATIONS GRANT PROGRAM
IM	INTEROPERABILITY MONTANA
IMPD	INTEROPERABILITY MONTANA PROJECT DIRECTORS
HSSP	HOMELAND SECURITY STRATEGIC PLAN
IP	INTERNET PROTOCOL
LMR	LAND MOBILE RADIO
NECP	NATIONAL EMERGENCY COMMUNICATIONS PLAN
NG911	NEXT GENERATION 911
NPSBN	Nationwide Public Safety Broadband Network
NTIA	National Telecommunications and Information Administration
OEC	Office of Emergency Communications
P25	Project 25
PPD	Presidential Policy Directive
PSCB	Public Safety Communications Bureau
SCIP	Statewide Communication Interoperability Plan
SIGB	Statewide Interoperability Governing Board
SLIGP	State and Local Grant Implementation Program
SOP	Standard Operating Procedure
SPOC	Single Point of Contact
SWIC	Statewide Interoperability Coordinator

## **APPENDIX B: Land Mobile Radio Definitions**

**Frequency** - Frequency is a term used to describe a specific radio wave. Radio signals are electromagnetic waves and frequency is the measure of how many waves cross a point in a given time. Often people use frequency to indicate where in the radio spectrum a radio transmits in. Radios do not transmit on a single frequency; they use a part of the spectrum on either side as well. This entire group of frequencies is called the bandwidth.

**Statewide Trunked LMR System(s)** - The equipment, software and hardware and infrastructure that are combined together into a statewide land mobile radio system of systems. Elements of the statewide system(s) include the Master Zone Controller housed at the Lewis and Clark County Law Enforcement Center, core and gateway routers, security servers, IV&D Packet Data Gateway, Microwave Relay(s); and, the Eastern Zone Controller with software, routers and servers housed at the Richland County Law Enforcement Center.

**Subsystem** - A major part of the statewide land mobile radio system of systems that performs specific functions or operations. Subsystem components include remote towers with microwave relay, send and receive antennae, radio trunking, conventional interoperability channel, repeater(s), remote site router(s) and MW relay. Subsystems include connectivity trunking enabled dispatch consoles. For example, Lewis and Clark County, the Montana Highway Patrol and Flathead County operate subsystems within and as a part of the Statewide System (see TRESAP definition below).

**Talk-Group** - A talk group is an assigned group on a trunked radio system. Unlike a conventional radio which assigns users a certain frequency, a trunk system takes a number of frequencies allocated to the system. Then the control channel coordinates the system so talk groups can share these frequencies seamlessly. The purpose is to dramatically increase bandwidth. Many radios today treat talk groups as if they were frequencies, since they behave like such. For example, on a radio scanner it is very common to be able to assign talk groups into banks or lock them out, exactly like that of conventional frequencies.

A “talk group” is often used synonymously with “channel,” however; a “talk group” is actually a computer-generated partition, an identification of an electronic location where users may communicate to each other. This is very similar to chat rooms on the Internet. They have a name and a method to connect, but they have no real existence in space or radio spectrum. They make use of another system controlled by a computer to connect users.

**Talkgroup – Multi-group** - Two or more talkgroups that are combined into a permanent multi-group in trunked systems. Calls to the multi-group reach all members of the talkgroups that comprise the multi-group, such as a single multi-group call to all law enforcement talkgroups.

**TRESAP** – TRESAP is a trunking enable system access point. It requires a dispatch center to have a direct tie to a Zone Controller and have a network client management terminal for system management.

**Trunking/Trunked** - The basic premise behind trunking in land mobile radio (LMR) systems is to efficiently utilize the radio frequency spectrum, and allow many users to operate on a few frequencies.

A trunked LMR system is a complex type of computer-controlled two-way radio system that allows sharing of relatively few radio frequency channels among a large group of users. Instead of assigning, for example, a radio channel to one particular organization at a time, users are instead assigned to a logical grouping, a "talk group". When any user in that group wishes to converse with another user in the talk group, a vacant radio channel is found automatically by the system and the conversation takes place on that channel. Many unrelated conversations can occur on a channel, making use of the otherwise idle time between conversations. Each radio transceiver contains a microcomputer to control it. A control channel coordinates all the activity of the radios in the system. The control channel computer sends packets of data to enable one talk group to talk together, regardless of frequency.

**User/Subscriber** - An agency, person, group or other entity which has an existing executed written Subscriber Agreement. The terms user and subscriber are synonymous and interchangeable.

**Users – Primary** - Primary users have trunking ready subscriber units and are included in the initial fleet mapping design.

**Users – Secondary** - Secondary users do not currently have trunking ready subscriber units. Once subscriber units are acquired, they will need access to the trunked system and are included in the fleet mapping design.

**Users – Tertiary** - Tertiary users may not necessarily require specific system access, but are included in the initial fleet mapping design due to the need for either primary or secondary users to communicate with them.

**Zone** - When referring to programming a subscriber radio, a "zone" represents a group or bank of up to 16 modes. Zones will be identified as "A" – "B" – "C" and so on, depending on the specific radio and total number of zones available for programming.